

REMARKS

The following remarks are made in response to the Non-Final Office Action mailed November 24, 2009. Claims 16-29 and 47-59 have previously been withdrawn from consideration. Claims 1-10, 12-15, 30-39, 41-46 and 60-63 were rejected. Claims 11 and 40 have been objected to. With this Response, claim 60 has been amended and claims 61 and 62 have been cancelled without prejudice. Claims 1-15, 30-46, 60, 63, and 64 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 103

Claims 1-10, 12-15, 30-39, 41-46 and 60-63 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,381,541 to Sadler ("Sadler") in view of U.S. Patent No. 4,527,158 to Runnels ("Runnels").

Applicant respectfully submits that neither Sadler nor Runnels, either alone or in combination, teach or suggest a ground surface location as defined by independent claim 1 or an airfield ground surface location system as defined by independent claims 30 and 60.

The Office Action, at page 4, concedes that Sadler fails to teach or suggest the use of a light source as part of a location transmitter or airfield guidance marker, nor the types of power source control necessary to appropriately modulate a light source so as to encode and transmit a physical location code. However, the Office Action asserts that such teachings are obvious in view of Runnels. Applicant respectfully disagrees.

Runnels describes an aircraft collision pilot warning indicating system which includes a beacon mounted to an aircraft, wherein the beacon includes a warning strobe flasher 22 for warning other aircraft, radiation detectors 1 (e.g. 1a through 1l), and a light signal detector 51 (Abstract; Col. 7, lines 22-23; Col. 4, lines 42-46; and Col. 8, lines 31-32). While Runnels employs a warning strobe flasher 22, Runnels simply teaches that the strobe is pulsed at flashing rate of typically 50 to 150 times per minute (Col 7, lines 22-26), which Applicant submits is precisely the conventional function of strobe lights, and does not teach or suggest modulating warning strobe flasher 22 at specific frequencies so as to be detected above unavoidable

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background light as asserted by the Office Action (Office Action, page 4). Instead, Runnels merely teaches that light signal detector 51 includes a bandpass filter designed to filter out unavoidable background light and to have a frequency bandpass designed to match the frequency content of typical strobe pulse waveforms so as to be suitable for use with conventional strobe flashers (Col. 8, lines 31-55).

In view of the above, Applicant submits that Runnels fails to teach or suggest modulating a light source at specific frequencies so as to be detected above unavoidable background light, as asserted by the Office Action, but simply teaches the detection of a conventional strobe light. As such, Applicant submits that Sadler in combination with Runnels fails to teach or suggest the use of a light source as part of a location transmitter or airfield guidance marker, nor the types of power source control necessary to appropriately modulate a light source so as to encode and transmit a physical location code, as defined by independent claims 1, 30, and 60.

Additionally, with respect to independent claim 60, Sadler and Runnels make no mention whatsoever of airfield guidance markers let alone a teaching or suggest that modulating the light source of such airfield guidance markers so as to optically encode the guidance illumination with a physical location code. Runnels is concerned with conventional strobe lights and detectors mounted on aircraft or other structures (e.g. towers), while Sadler is concerned with non-optical (e.g. radio, microwave; Col. 3, lines 36-44) wireless transceivers (i.e. interrogators 1100-1110 of Figure 11) which are positioned at intervals along a runway and wirelessly transmit/receive signals between aircraft and a ground location evaluator 308 (Col. 7, lines 20-42). The interrogators of Sadler are completely independent from any guidance marker with Sadler, in fact, making no mention whatsoever of visual guidance markers. Applicant submits that to suggest that one of ordinary skill in the art would modify the unmentioned guidance markers so as to provide an optically encoded signal so as to replace the standalone wireless interrogators 1100-1110 of Sadler requires the impermissible use of hindsight in view of the teachings of the present application. Furthermore, even if one were to replace the wireless interrogators of Sadler with modified guidance markers, the functionality of the Sadler system would be destroyed as the aircraft are configured to receive wireless signals (e.g. radio and

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microwave) from the interrogators and not configured to receive optical signals. As such, Applicant respectfully submits that one of ordinary skill in the art simply would not, and could not, combine the teachings of Runnels with those of Sadler as asserted by the Office Action.

In view of the above, Applicant respectfully submits that neither Sadler nor Runnels, either alone or in combination, teach or suggest a ground surface location as defined by independent claim 1 or an airfield ground surface location system as defined by independent claims 30 and 60. As such, Applicant respectfully requests that the rejections of independent claims 1, 30, and 60 under 35 U.S.C. 103 over Sadler in view of Runnels be withdrawn and the independent claims 1, 30, and 60 be allowed.

Since claims 2-13 and 15 depend from and further define patentably distinct independent claim 1, claims 31-39 and 41-46 depend from and further define patentably distinct independent claim 30, and claims 63 and 64 depend from and further define patentably distinct independent claim 60, Applicant respectfully requests that the rejections of dependent claims 2-13, 15, 31-39, 41-46, 63, and 64 under 35 U.S.C. 103 also be withdrawn and the dependent claims 2-13, 15, 31-39, 41-46, 63, and 64 be allowed as well.

Allowable Subject Matter

Claims 11 and 40 were objected to for being dependent upon a rejected base claim, but indicated as being allowable if rewritten in independent form including all limitations of the base claim and any intervening claims.

While Applicant agrees with the Office Action, without acquiescing to the reasoning therein, that claims 11 and 40 would be allowable if rewritten in independent form, Applicant respectfully requests that the allowance of claims 11 and 40 be held in abeyance pending an examination of the present. Applicant submit that claims 11 and 40 are in allowable form for respectively depending from and further defining independent claims 1 and 30 which, as described above, are believed to be allowable.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-15, 30-46, 60, 63, and 64 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-15, 30-46, 60, 63, and 64 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Steven E. Dicke at Telephone No. (612) 573-2002, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

Dicke, Billig & Czaja
Fifth Street Towers, Suite 2250
100 South Fifth Street
Minneapolis, MN 55402

Respectfully submitted,

Douglas E. Woehler,

By his attorneys,

DICKE, BILLIG & CZAJA, PLLC
Fifth Street Towers, Suite 2250
100 South Fifth Street
Minneapolis, MN 55402
Telephone: (612) 573-2002
Facsimile: (612) 573-2005

Date: February 24, 2010

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/Steven E. Dicke/

Steven E. Dicke

Reg. No. 38,431